

A Numeracy

Write the numbers below in words:

58 _____

126 _____

3,435 _____

22,459 _____

599 _____

7,762 _____

B Numeracy

Write the number that means:

3 tens and 4 units _____

8 tens and 8 units _____

4 tens and 6 units _____

8 hundreds and 5 tens
and 6 units _____5 thousands, 7 hundreds,
3 tens and 2 units _____48 thousands, 3 hundreds,
6 tens and 1 unit _____

4 hundreds, 2 tens and 8 units _____

7 hundreds, 0 tens and 7 units _____

13 thousands, 0 hundreds,
5 tens and 0 units _____3 thousands, 0 hundreds,
0 tens and 9 units _____**C Numeracy**Rearrange the numbers from
largest to smallest.

32, 7, 21, 94 _____

93, 16, 94, 1 _____

62, 6, 36, 86 _____

75, 50, 35, 5 _____

20, 10, 60, 50 _____

13, 87, 41, 47 _____

Rearrange the numbers from
smallest to largest.

30, 27, 49, 8 _____

65, 14, 25, 97 _____

36, 30, 39, 35 _____

91, 21, 31, 71 _____

3, 8, 74, 55 _____

33, 11, 22, 77 _____

D Numeracy

Write 10 more than the following numbers:

22		65	
8		77	
36		136	
452		1,088	

Write the numbers 10 less
than the following numbers:

68		337	
12		18	
1,087		780	

Write the number that is 100 more than these:

0		84	
424		6,362	

Write the number that is 100 less than these:

654		13,560	
888		133,427	

E Numeracy

Write the next numbers in the following:

388 389 390 391 _____

2,436 2,437 2,438 2,439 _____

18,643 18,642 18,641 _____

4,997 4,998 4,999 _____

Sort these numbers in ascending order:

42 60 3 1,000 _____

13,000 12,800 15,726 _____

382 602 577 599 _____

4,601 6,401 1,064 1,046 _____

Sort these numbers in descending order:

20,130 13,120 30,102 _____

9,876 8,967 8,976 _____

F Numeracy

Fill in the number tables

+	2	4	6	8	10	12
2						
4						
6						
8						
10						
12						

+	5	10	15	20	25	30
5						
10						
15						
20						
25						
30						

Invent
your own
addition
tables

G Numeracy

Expanding numbers

2,462 = $2 \times 1000 + 4 \times 100 + 6 \times 10 + 2 \times 1$

3,495 = _____

15,777 = _____

60,490 = _____

123,582 = _____

36,905 = _____

11,008 = _____

2,999 = _____

H Numeracy

Read out loud the next three numbers after those given below.

98 500,055

174 55,555

902 58,200

1,808 74,407

2,029 80,008

10,121 84,800

10,933 86,224

13,288 91,326

24,770 99,998

25,800 104,462

28,003 108,331

30,133 150,000

31,301 461,461

40,000 1,000,000

I

Numeracy

Find the missing numbers below:

7 x 3 =	9 x = 45
6 x = 12	10 x = 60
8 x 1 =	4 x = 44
x 5 = 25	3 x = 6
2 x = 24	x 7 = 77
x = 20	4 x 5 =
7 x = 49	4 x =
6 x 6 =	9 x 9 =
9 x = 36	7 x 9 =
2 x = 8	6 x 11 =
x 8 = 24	x = 60
8 x 4 =	x = 10
5 x = 45	x = 15
8 x = 48	x = 35

J

Numeracy

FACTORS

Factors are whole numbers which divide exactly into another. Find the factors of the following numbers:

Example: $8 = 2 \times 4$
 $8 = 1 \times 8$

So 1, 2, 4, and 8 are all factors of 8.

Find the factors of 12 _____

Find the factors of 14 _____

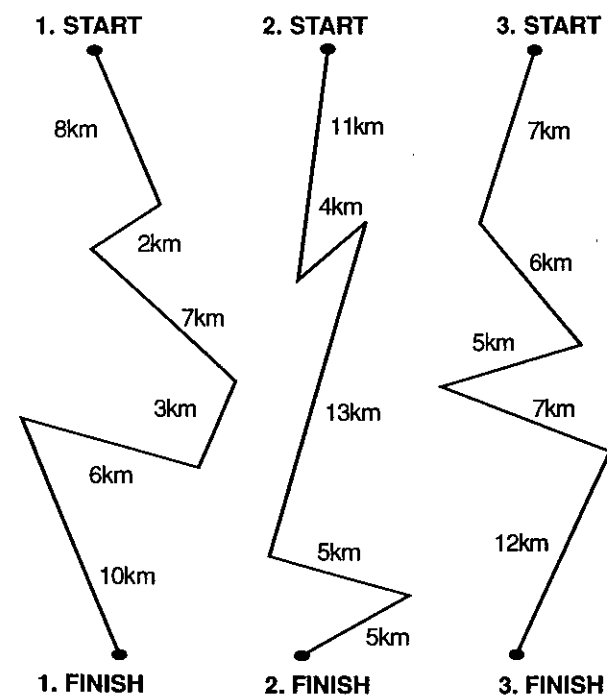
Find the factors of 20 _____

Find the factors of 18 _____

K

Numeracy

Which of the road routes below is the shortest! (Try and add up in your head)



The shortest route is _____

L

Numeracy

Add the correct sign below to make the solution correct.

3	_____	2	=	6
5	_____	5	=	25
5	_____	5	=	1
5	_____	5	=	0
24	_____	6	=	4
36	_____	6	=	6
5	_____	10	=	50
12	_____	3	=	4
4	_____	4	=	16
70	_____	5	=	14
30	_____	7	=	23
16	_____	9	=	7
8	_____	13	=	21
64	_____	16	=	4

A Number Study

Can you add these numbers in your head?

$$2 + 3 + 4 + 1 = \underline{\hspace{2cm}}$$

$$4 + 5 + 1 = \underline{\hspace{2cm}}$$

$$1 + 1 + 2 + 10 = \underline{\hspace{2cm}}$$

$$9 + 1 + 10 = \underline{\hspace{2cm}}$$

$$10 + 10 + 20 = \underline{\hspace{2cm}}$$

$$11 + 9 + 9 + 1 = \underline{\hspace{2cm}}$$

$$19 + 1 + 10 + 10 = \underline{\hspace{2cm}}$$

$$12 + 8 + 12 + 8 = \underline{\hspace{2cm}}$$

$$13 + 7 + 30 = \underline{\hspace{2cm}}$$

$$47 + 3 + 47 + 3 = \underline{\hspace{2cm}}$$

$$100 + 49 + 51 = \underline{\hspace{2cm}}$$

$$34 + 100 + 66 = \underline{\hspace{2cm}}$$

$$45 + 5 + 17 + 3 = \underline{\hspace{2cm}}$$

B Number Study

Magic Squares. Fill in the missing numbers so that columns rows and diagonals add up to the same number.

4		7
9		
5	5	

2	6	7
		0

		9
11	9	7
9		

	17	
9	7	20

C Number Study

Try these Magic Squares! All columns, rows and diagonals must come to the same total.

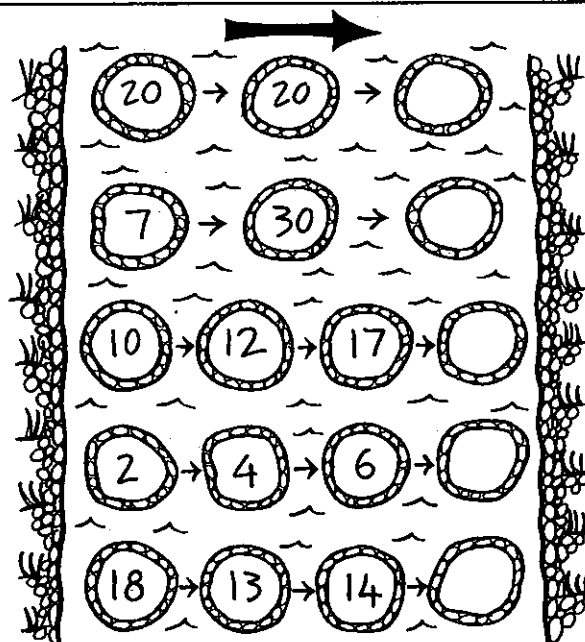
13		12	
3		6	
2	11		
16	5		4

15	10		3
		8	
4	13	9	16
	7		

	20		9
	11	12	14
13	15		
	8	7	

D Number Study

To jump across the river you have to walk on the stepping stones. Each line of stones has to add up to a total of 60 so that you can jump onto the last stone. Find the missing number.



E Number Study

Addition Problems

27	19	87	79
33 +	45 +	64 +	79 +
_____	_____	_____	_____
_____	_____	_____	_____

72	165	391	70
108	6	679	495
99 +	984 +	20 +	98 +
_____	_____	_____	_____
_____	_____	_____	_____

21	200	3	410
60	892	333	91
440	545	242	1,026
99 +	24 +	889 +	8,045 +
_____	_____	_____	_____
_____	_____	_____	_____

F Number Study

Addition Problems

• Steve was given \$5 then \$8 then \$7. How much did he have? _____

• 7 girls arrived at the party then 10 boys, then 8 girls, 4 boys and 6 girls.

• How many boys were there? _____

• How many girls were there? _____

• The 22m long house had a 17m extension built.
What was its new length? _____

• The \$120,000 house went up by 22,500 dollars, then another 11,000 dollars.

• What was its final price? _____

$$\$42 + \$65 = \underline{\hspace{2cm}}$$

$$\$12 + \$56 + \$18 = \underline{\hspace{2cm}}$$

G Number Study

Subtraction Problems

87	62	95	74
33 -	40 -	35 -	64 -
_____	_____	_____	_____
_____	_____	_____	_____

75	42	90	54
46 -	27 -	43 -	28 -
_____	_____	_____	_____
_____	_____	_____	_____

168	468	568	431
33 -	231 -	369 -	187 -
_____	_____	_____	_____
_____	_____	_____	_____

8,566	5,279	4,002	2,160
3,145 -	4,288 -	3,620 -	2,088 -
_____	_____	_____	_____
_____	_____	_____	_____

H Number Study

Subtraction Problems

Bill, who had \$40 in his wallet paid a \$14 fine.
How much did he have left? _____

Rain washed away 34 metres of the 300 metre long road.
How much was left? _____

Sue had \$50. Three friends were given \$6 each.
What did she have left? _____

$$\$87 - \$30 = \underline{\hspace{2cm}}$$

$$\$100 - \$42 = \underline{\hspace{2cm}}$$

$$\$16.50 - \$11.40 = \underline{\hspace{2cm}}$$

In a crowd of 640 people 160 of them left early.
How many were left? _____

I Number Study

Multiplication Problems

9 7 x _____ _____	11 6 x _____ _____	7 8 x _____ _____	13 4 x _____ _____
71 5 x _____ _____	62 4 x _____ _____	88 3 x _____ _____	34 8 x _____ _____
12 9 x _____ _____	66 6 x _____ _____	57 8 x _____ _____	13 2 x _____ _____
71 6 x _____ _____	55 2 x _____ _____	96 4 x _____ _____	31 5 x _____ _____

J Number Study

Multiplication Problems

- 12 boxes each containing 30 items were delivered.

How many items were there? _____

- Each of the 15 seedboxes contained 20 seedlings.

How many plants were there? _____

- A street containing 89 houses had an average of 3 letters dropped at each home.

How many letters were delivered altogether? _____

K Number Study

Multiplying by Powers of 10

Look at the numbers of noughts on the multiplier and just add them to the number being multiplied.

e.g. $326 \times 1,000 = 326,000$

e.g. $17 \times 10,000 = 170,000$

$43 \times 10 =$ _____

$117 \times 100 =$ _____

$926 \times 10,000 =$ _____

$65 \times 100 =$ _____

$34 \times 1,000,000 =$ _____

$49 \times 100,000 =$ _____

$126 \times 1,000 =$ _____

$769 \times 10,000 =$ _____

$1,262 \times 1,000 =$ _____

L Number Study

Multiplication Problems

- Each television (and there were 60 in the shop) contained 420 individual components. How many components were needed altogether?

- The playing field, made up of 7000m^2 of grass needed 50 grams of fertilizer per metre^2 .

How much fertilizer was needed?

- **(Advanced part!)** There are 1000 grams in a kilogram. Can you give the above answer in kilograms?

M Number Study

Solve the following division problems.
(There are no remainders)

$3 \overline{) 27}$	$7 \overline{) 21}$	$4 \overline{) 12}$
$5 \overline{) 35}$	$6 \overline{) 42}$	$7 \overline{) 42}$
$8 \overline{) 88}$	$90 \overline{) 630}$	$10 \overline{) 100}$
$7 \overline{) 84}$	$6 \overline{) 72}$	$4 \overline{) 56}$
$3 \overline{) 39}$	$4 \overline{) 164}$	$7 \overline{) 147}$

N Number Study

Solve the following division problems

$4 \overline{) 456}$	$7 \overline{) 7,357}$	$6 \overline{) 2,526}$
$3 \overline{) 771}$	$5 \overline{) 4,025}$	$2 \overline{) 3,972}$
$8 \overline{) 1,088}$	$9 \overline{) 5,868}$	$4 \overline{) 3,944}$
$6 \overline{) 3,246}$	$5 \overline{) 9,625}$	$3 \overline{) 1,905}$
$6 \overline{) 1,950}$	$8 \overline{) 7,952}$	$4 \overline{) 2,660}$

O Number Study

Solve these division problems
with remainders.

$4 \overline{) 49}$	$7 \overline{) 79}$	$8 \overline{) 75}$
$6 \overline{) 609}$	$3 \overline{) 1,000}$	$2 \overline{) 8,011}$
$5 \overline{) 1,624}$	$4 \overline{) 1,770}$	$9 \overline{) 3,226}$
$4 \overline{) 1,475}$	$7 \overline{) 6,220}$	$6 \overline{) 3,970}$
$3 \overline{) 374}$	$9 \overline{) 5,448}$	$8 \overline{) 3,293}$

P Number Study

Solve these division problems.

8 students shared 144 lollies. How many did they each have?	$\overline{) \quad \quad}$
7 cartons of batteries had a total of 168 items. How many batteries were in each carton?	$\overline{) \quad \quad}$
6 classrooms contained 192 students. What was the average number in each room?	$\overline{) \quad \quad}$
\$6,680 was shared between 4 people. What did they each get?	$\overline{) \quad \quad}$

Q Number Study

Grouping Numbers Together

Can you insert signs that will make these statements correct?

	1	1	=	1
	2	2	=	1
	6	3	=	2
	9	3	=	27
3	7	3	=	7
5	5	5	=	5
4	2	2	=	0
48	12	4	=	8
14	12	10	=	16
6	14	2	=	42
12	4	3	=	0
84	4	3	=	7

R Number Study

Simplifying Statements

If there are no brackets, start at the left and move right. Do multiplications and divisions as you come to them. Then additions and subtractions.

Example

$$8 \times 2 + 3 \times 9 - 4 \div 2 = 16 + 27 - 2 = 41$$

Simplify

$$3 \times 2 + 6 \times 4 + 8 \div 2 = \underline{\hspace{2cm}}$$

$$6 \times 7 - 4 \times 5 = \underline{\hspace{2cm}}$$

$$3 \times 5 + 2 \times 8 - 6 = \underline{\hspace{2cm}}$$

$$100 \div 2 - 5 \times 4 = \underline{\hspace{2cm}}$$

$$30 - 6 \times 4 + 5 = \underline{\hspace{2cm}}$$

$$50 \div 5 \div 2 + 3 = \underline{\hspace{2cm}}$$

S Number Study

Simplifying Statements

Solve brackets, then \times , \div , $+$ and $-$

Examples

$$6 \times 4 - (3 \times 2) - 8 = 24 - 6 - 8 = 10$$

$$(4 \times 1) \div (9 \times 2) \div 2 = 4 \div 18 \div 2 = 4 \div 9 = 13$$

Simplify

$$(13 + 7) \div 2 + (18 \div 2) \times 2 =$$

$$(2 \times 3 \times 4) \div 2 - (4 \times 2) =$$

$$(44 \div 2) - 2 + (4 \times 4) =$$

$$(16 + 4 + 20) \times 2 - 15 =$$

$$2 \times (14 + 6 + 10 + 2) - 14 =$$

T Number Study

Simplifying Statements

If there is more than one bracket do the "inside" brackets first.

Example

$$[(3 \times 2) + 8] + [(5 \times 4) - 6] + 8 = [14] + [14] + 8 = 36$$

Simplify

$$[6 + (5 \times 6)] \div [(2 \times 2) + 2] + 5$$

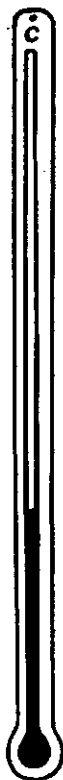
$$[(4 \times 5) + (3 \times 2) + 2] \times 5$$

$$[18 - (3 \times 4)] \times [7 \times 6 \div 7 + (3 \times 1)]$$

$$[16 - (4 \times 4)] \times [(8 + 4) \times 6] + 6$$

A The Number Line

Work out the temperatures below.

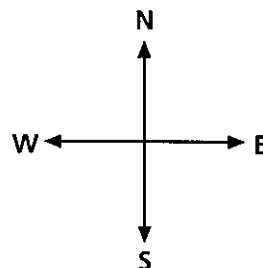


- It is 23°C. What will it be if it rises another 14°C? _____
- What temperature is 14°C lower than 23°C? _____
- The lowest temperature over the day was 8°C and the highest was 35°C. How much had the temperature varied over the day? _____
- It was 16°C and the temperature rose 4°C per hour for the next 4 hours. What was the final temperature? _____

$$20^{\circ} + 8^{\circ} + 6^{\circ} = 2^{\circ} = 2^{\circ} = \underline{\hspace{2cm}}$$

B The Number Line

If you travelled the indicated distances and directions given below where would you be?



- 20 km North then 8 km South. _____
- 3 km East then 4 km West _____
- 4 km North + 17 km North then 8 km South _____
- 12 km North + 3 km North then 6 km south then 9 km south _____
- 8 km E + 7 km E then 3 km W then 5 km W. _____
- You are 30 km East. How far must you travel to reach the point 40 km West?

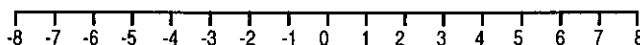
C The Number Line

Can you think of words that mean the opposite to the following?

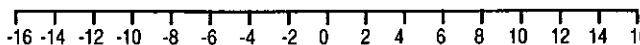
North	_____	_____
_____	Positive	_____
Rise	_____	_____
_____	Increase	_____
Outside	_____	_____
_____	Above	_____
Accelerate	_____	_____
Increase	_____	_____
_____	Win	_____
Gain	_____	_____
Left	_____	_____
_____	South-west	_____
_____	East	_____
Before	_____	_____

D The Number Line

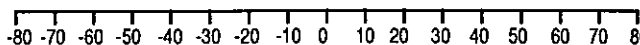
Mark the points indicated below on the number lines with a cross.



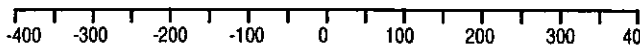
Mark the points - 3, -7, 3, 8



Mark the points 8, 3, -9, -15, 15



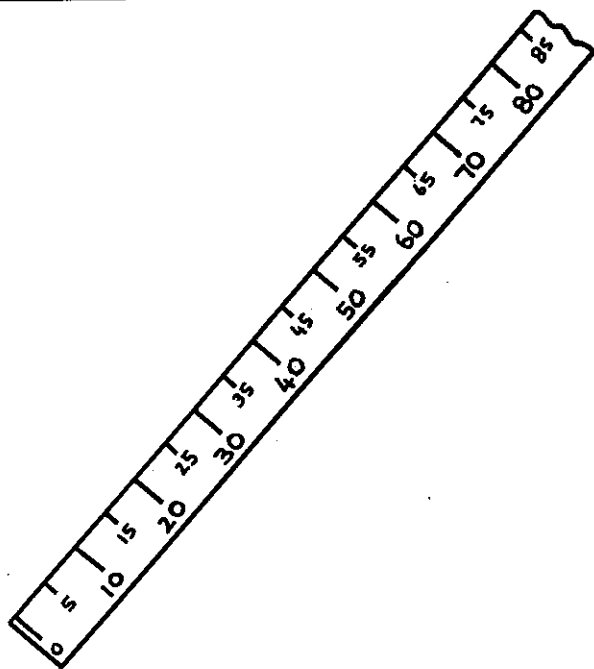
Mark the points - 65, 65, -32, 48, 6



Mark the points 150, -250, 300, -350

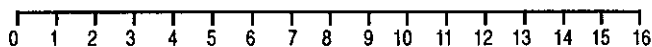
E The Number Line

The number line below could represent your life from birth to death. Write the events you would like to happen next to the appropriate year.



F The Number Line

Positive number line



The line just represents positive numbers.

Work out the next numbers in the series involving positive numbers.

1 3 5 7 9 11 _____

0 4 8 12 _____

1 6 11 16 _____

28 26 24 22 20 _____

30 27 24 21 18 _____

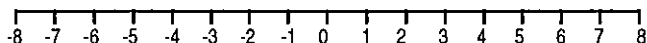
31 29 27 25 _____

7 14 21 28 _____

80 71 62 53 _____

G The Number Line

Positive and Negative Numbers



The number line can extend into negative numbers.

Find the next numbers in the series below.

4 3 2 1 0 _____

8 6 4 2 0 _____

5 2 -1 -4 _____

-10 -8 -6 -4 _____

20 15 10 5 _____

30 20 10 0 _____

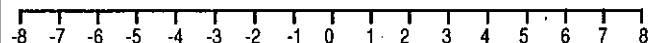
18 12 6 _____

15 9 3 _____

-32 -22 -12 _____

H The Number Line

Ascending and Descending Order



Arrange the following numbers into ascending order.

-1 8 4 -3 _____

12 -12 6 -6 _____

2 0 8 -1 _____

-40 -50 3 -17 _____

3 -4 -10 8 _____

-15 2 -16 -13 _____

10 4 -3 5 _____

40 -14 7 60 _____

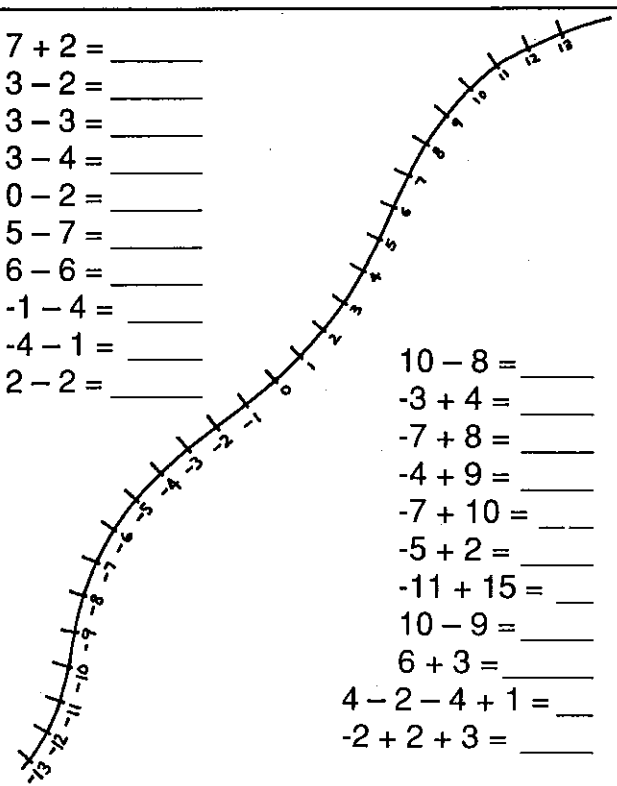
-12 -7 0 64 _____

8 -40 34 0 _____

I The Number Line

Use the number line to answer these questions.

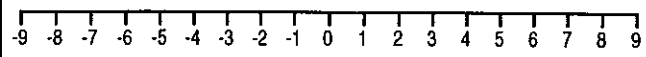
$$\begin{aligned} 7 + 2 &= \underline{\hspace{2cm}} \\ 3 - 2 &= \underline{\hspace{2cm}} \\ 3 - 3 &= \underline{\hspace{2cm}} \\ 3 - 4 &= \underline{\hspace{2cm}} \\ 0 - 2 &= \underline{\hspace{2cm}} \\ 5 - 7 &= \underline{\hspace{2cm}} \\ 6 - 6 &= \underline{\hspace{2cm}} \\ -1 - 4 &= \underline{\hspace{2cm}} \\ -4 - 1 &= \underline{\hspace{2cm}} \\ 2 - 2 &= \underline{\hspace{2cm}} \end{aligned}$$



$$\begin{aligned} 10 - 8 &= \underline{\hspace{2cm}} \\ -3 + 4 &= \underline{\hspace{2cm}} \\ -7 + 8 &= \underline{\hspace{2cm}} \\ -4 + 9 &= \underline{\hspace{2cm}} \\ -7 + 10 &= \underline{\hspace{2cm}} \\ -5 + 2 &= \underline{\hspace{2cm}} \\ -11 + 15 &= \underline{\hspace{2cm}} \\ 10 - 9 &= \underline{\hspace{2cm}} \\ 6 + 3 &= \underline{\hspace{2cm}} \\ 4 - 2 - 4 + 1 &= \underline{\hspace{2cm}} \\ -2 + 2 + 3 &= \underline{\hspace{2cm}} \end{aligned}$$

J The Number Line

Find the midway point between the pairs of numbers given below.



6 and 2	$\underline{\hspace{2cm}}$	-6 and 0	$\underline{\hspace{2cm}}$
8 and 4	$\underline{\hspace{2cm}}$	0 and 8	$\underline{\hspace{2cm}}$
0 and 6	$\underline{\hspace{2cm}}$	-8 and 6	$\underline{\hspace{2cm}}$
2 and 8	$\underline{\hspace{2cm}}$	-8 and 8	$\underline{\hspace{2cm}}$
2 and 0	$\underline{\hspace{2cm}}$	-7 and -1	$\underline{\hspace{2cm}}$
-2 and 0	$\underline{\hspace{2cm}}$	-5 and -1	$\underline{\hspace{2cm}}$
-4 and 0	$\underline{\hspace{2cm}}$	-4 and 6	$\underline{\hspace{2cm}}$
-2 and 2	$\underline{\hspace{2cm}}$	-9 and 9	$\underline{\hspace{2cm}}$
-2 and 4	$\underline{\hspace{2cm}}$	-3 and 1	$\underline{\hspace{2cm}}$
-8 and 0	$\underline{\hspace{2cm}}$	-1 and 5	$\underline{\hspace{2cm}}$

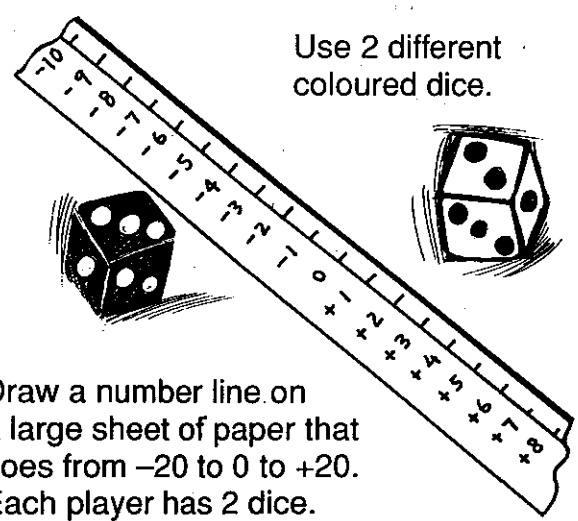
K The Number Line

Put the correct sign into the operations below.

6 $\underline{\hspace{1cm}}$ = 2	8 $\underline{\hspace{1cm}}$ = 0
-4 $\underline{\hspace{1cm}}$ = 0	7 $\underline{\hspace{1cm}}$ = -2
-1 $\underline{\hspace{1cm}}$ = 2	6 $\underline{\hspace{1cm}}$ = -3
2 $\underline{\hspace{1cm}}$ = -3	4 $\underline{\hspace{1cm}}$ = -5
3 $\underline{\hspace{1cm}}$ = -5	2 $\underline{\hspace{1cm}}$ = -10
4 $\underline{\hspace{1cm}}$ = 11	3 $\underline{\hspace{1cm}}$ = -1
0 $\underline{\hspace{1cm}}$ = -6	12 $\underline{\hspace{1cm}}$ = 3
-2 $\underline{\hspace{1cm}}$ = -3	4 $\underline{\hspace{1cm}}$ = -8
-10 $\underline{\hspace{1cm}}$ = -8	-7 $\underline{\hspace{1cm}}$ = 3
-10 $\underline{\hspace{1cm}}$ = 0	-7 $\underline{\hspace{1cm}}$ = 2
-6 $\underline{\hspace{1cm}}$ = 2	10 $\underline{\hspace{1cm}}$ = -1
-5 $\underline{\hspace{1cm}}$ = -4	9 $\underline{\hspace{1cm}}$ = -2
-2 $\underline{\hspace{1cm}}$ = -1	-2 $\underline{\hspace{1cm}}$ = 6
0 $\underline{\hspace{1cm}}$ = 8	2 $\underline{\hspace{1cm}}$ = 2

L The Number Line

Hitting the target.



Use 2 different coloured dice.

Draw a number line on a large sheet of paper that goes from -20 to 0 to +20. Each player has 2 dice. (One + and One -). Each player nominates a number they would like to finish on.

Start at 0 and take turns at throwing 2 dice. Let one dice move you in a positive direction and one in a negative one. Who gets to their nominated number first?

M The Number Line

Directed Numbers

$$7 + 6 - 4 + 3 - 8 = 4$$

This can be written as:

$$(+7) + (+6) + (-4) + (+3) + (-8) = 4$$

Work out the following.

$$(-3) + (+2) + (+20) + (-8) + (-8) = \underline{\hspace{2cm}}$$

$$(+20) + (-3) + (-8) + (-5) + (-4) = \underline{\hspace{2cm}}$$

$$(+62) + (-20) + (+3) + (-15) + (+7) = \underline{\hspace{2cm}}$$

$$(-80) + (+20) + (+30) + (+30) + (-80) = \underline{\hspace{2cm}}$$

$$(0) + (+16) + (+24) + (-60) + (+5) = \underline{\hspace{2cm}}$$

N The Number Line

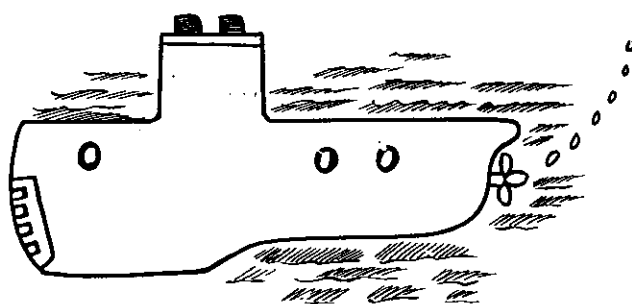
Submarine Problem

A submarine starts at the surface of the sea (0). It then descends 200 m, ascends 60 m, descends 34 m and ascends 20 m. What is its final depth?

Write out a number statement to work it out.

Final depth =

$$(0) + (\quad) + (\quad) + (\quad) + (\quad)$$



O The Number Line

Solve the following problems.

$$(-8) + (\quad) = 0$$

$$(+36) + (\quad) = 0$$

$$(+100) + (-110) =$$

$$(-80) + (\quad) = +(-100)$$

$$(-10) + (\quad) = (+25)$$

$$(\quad) + (+13) = (+23)$$

$$(\quad) + (-8) = (-20)$$

$$(+200) + (\quad) = (-500)$$

$$(+62) + (\quad) + (\quad) = (+82)$$

$$(+35) + (\quad) = (-35)$$

$$(-12) + (\quad) = (+12)$$

$$(-3) + (+ \quad) = 1$$

$$(-1,000) + (\quad) = (-1,500)$$

$$(-2) + (-2) + (-2) + (\quad) = (-10)$$

P The Number Line

Walking Problem/ You set a problem!

A woman walks 2 km north, 3 km south, 11 kilometres south, 5 km north and 8 km south.

Set up a number statement to find out where she finishes up.

You set a problem.

$$8 + 4 - 1 + 2$$

Write out a statement that uses the above numbers.

A Numeracy

Write the numbers below in words:

58	Fifty eight
126	One hundred and twenty six
3,435	Three thousand four hundred and thirty five
22,459	Twenty two thousand four hundred and fifty nine
599	Five hundred and ninety nine
7,762	Seven thousand seven hundred and sixty two

B Numeracy

Write the number that means:

3 tens and 4 units	34
8 tens and 8 units	88
4 tens and 6 units	46
8 hundreds and 5 tens and 6 units	856
5 thousands, 7 hundreds, 3 tens and 2 units	5,732
48 thousands, 3 hundreds, 6 tens and 1 unit	48,361
4 hundreds, 2 tens and 8 units	428
7 hundreds, 0 tens and 7 units	707
13 thousands, 0 hundreds, 5 tens and 0 units	13,050
3 thousands, 0 hundreds, 0 tens and 9 units	3,009

C Numeracy

Rearrange the numbers from
largest to smallest.

32, 7, 21, 94	94, 32, 21, 7
93, 16, 94, 1	94, 93, 16, 1
62, 6, 36, 86	86, 62, 36, 6
75, 50, 35, 5	75, 50, 35, 5
20, 10, 60, 50	60, 50, 20, 10
13, 87, 41, 47	87, 47, 41, 13

Rearrange the numbers from
smallest to largest.

30, 27, 49, 8	8, 27, 30, 49
65, 14, 25, 97	14, 25, 65, 97
36, 30, 39, 35	30, 35, 36, 39
91, 21, 31, 71	21, 31, 71, 91
3, 8, 74, 55	3, 8, 55, 74
33, 11, 22, 77	11, 22, 33, 77

D Numeracy

Write 10 more than the following numbers:

22	32	65	75
8	18	77	87
36	46	136	146
452	462	1,088	1,098

Write the numbers 10 less
than the following numbers:

68	58	337	327
12	2	18	8
1,087	1,077	780	770

Write the number that is 100 more than these:

0	100	84	184
424	524	6,362	6,462

Write the number that is 100 less than these:

654	554	13,560	13,460
888	788	133,427	133,327

E

Numeracy

Write the next numbers in the following:

388 389 390 391 392 393
2,436 2,437 2,438 2,439 2,440 2,441
18,643 18,642 18,641 18,640 18,639
4,997 4,998 4,999 5,000 5,001

Sort these numbers in ascending order:

42 60 3 1,000 3 42 60 1,000
13,000 12,800 15,726 12,800 13,000 15,726
382 602 577 599 382 577 599 602
4,601 6,401 1,064 1,046 1,046 1,064 4,601 6,401

Sort these numbers in descending order:

20,130 13,120 30,102 30,102 20,130 13,120
9,876 8,967 8,976 9,876 8,976 8,967

F

Numeracy

Fill in the number tables

+	2	4	6	8	10	12
2	4	6	8	10	12	14
4	6	8	10	12	14	16
6	8	10	12	14	16	18
8	10	12	14	16	18	20
10	12	14	16	18	20	22
12	14	16	18	20	22	24

+	5	10	15	20	25	30
5	10	15	20	25	30	35
10	15	20	25	30	35	40
15	20	25	30	35	40	45
20	25	30	35	40	45	50
25	30	35	40	45	50	55
30	35	40	45	50	55	60

Invent
your own
addition
tables

G

Numeracy

Expanding numbers

2,462 = $2 \times 1000 + 4 \times 100 + 6 \times 10 + 2 \times 1$
3,495 = $3 \times 1000 + 4 \times 100 + 9 \times 10 + 5 \times 1$

15,777 = $1 \times 10\,000 + 5 \times 1000 + 7 \times 100$
 $+ 7 \times 10 + 7 \times 1$
60,490 = $6 \times 10\,000 + 0 \times 1000 + 4 \times 100$
 $+ 9 \times 10 + 0 \times 1$
123,582 = $1 \times 100\,000 + 2 \times 10\,000 + 3 \times 1000$
 $+ 5 \times 100 + 8 \times 10 + 2 \times 1$
36,905 = $3 \times 10\,000 + 6 \times 1000 + 9 \times 100$
 $+ 0 \times 10 + 5 \times 1$
11,008 = $1 \times 10\,000 + 1 \times 1000 + 0 \times 100$
 $+ 0 \times 10 + 8 \times 1$
2,999 = $2 \times 1000 + 9 \times 100 + 9 \times 10 + 9 \times 1$

H

Numeracy

Read out loud the next three numbers after those given below.

98	500,055
174	55,555
902	58,200
1,808	74,407
2,029	80,008
10,121	84,800
10,933	86,224
13,288	91,326
24,770	99,998
25,800	104,462
28,003	108,331
30,133	150,000
31,301	461,461
40,000	1,000,000

I

Numeracy

Find the missing numbers below:

7 x 3 = <u>21</u>	9 x <u>5</u> = 45
6 x <u>2</u> = 12	10 x <u>6</u> = 60
8 x <u>1</u> = <u>8</u>	4 x <u>11</u> = 44
<u>5</u> x 5 = 25	3 x <u>2</u> = 6
2 x <u>12</u> = 24	<u>11</u> x 7 = 77
* <u>5</u> x <u>4</u> = 20	4 x 5 = <u>20</u>
7 x <u>7</u> = 49	4 x <u>12</u> = <u>48*</u>
6 x 6 = <u>36</u>	9 x 9 = <u>81</u>
9 x <u>4</u> = 36	7 x 9 = <u>63</u>
2 x <u>4</u> = 8	6 x 11 = <u>66</u>
<u>3</u> x 8 = 24	* <u>12</u> x <u>5</u> = 60
8 x 4 = <u>32</u>	<u>2</u> x <u>5</u> = 10
5 x <u>9</u> = 45	<u>3</u> x <u>5</u> = 15
8 x <u>6</u> = 48	<u>5</u> x <u>7</u> = 35

J

Numeracy

FACTORS

Factors are whole numbers which divide exactly into another. Find the factors of the following numbers:

Example: $8 = 2 \times 4$
 $8 = 1 \times 8$

So 1, 2, 4, and 8 are all factors of 8.

Find the factors of 12 1, 12, 2, 6, 3, 4

Find the factors of 14 1, 14, 2, 7

Find the factors of 20 1, 20, 2, 10, 4, 5

Find the factors of 18 1, 18, 2, 9, 3, 6

K

Numeracy

Which of the road routes below is the shortest! (Try and add up in your head)

Route 1 is 36 km

Route 2 is 38km

Route 3 is 37km

Route 1 is the shortest

L

Numeracy

Add the correct sign below to make the solution correct.

3	<u>x</u>	2	=	6
5	<u>x</u>	5	=	25
5	<u>÷</u>	5	=	1
5	<u>-</u>	5	=	0
24	<u>÷</u>	6	=	4
36	<u>÷</u>	6	=	6
5	<u>x</u>	10	=	50
12	<u>÷</u>	3	=	4
4	<u>x</u>	4	=	16
70	<u>÷</u>	5	=	14
30	<u>-</u>	7	=	23
16	<u>-</u>	9	=	7
8	<u>+</u>	13	=	21
64	<u>÷</u>	16	=	4

* other possibilities here

A Number Study

Can you add these numbers in your head?

$2 + 3 + 4 + 1$	$=$	10
$4 + 5 + 1$	$=$	10
$1 + 1 + 2 + 10$	$=$	14
$9 + 1 + 10$	$=$	20
$10 + 10 + 20$	$=$	40
$11 + 9 + 9 + 1$	$=$	30
$19 + 1 + 10 + 10$	$=$	40
$12 + 8 + 12 + 8$	$=$	40
$13 + 7 + 30$	$=$	50
$47 + 3 + 47 + 3$	$=$	100
$100 + 49 + 51$	$=$	200
$34 + 100 + 66$	$=$	200
$45 + 5 + 17 + 3$	$=$	70

B Number Study

Magic Squares. Fill in the missing numbers so that columns rows and diagonals add up to the same number.

4	7	7
9	6	3
5	5	8

2	6	7
10	5	0
3	4	8

7	11	9
11	9	7
9	7	11

4	17	15
23	12	1
9	7	20

C Number Study

Try these Magic Squares! All columns, rows and diagonals must come to the same total.

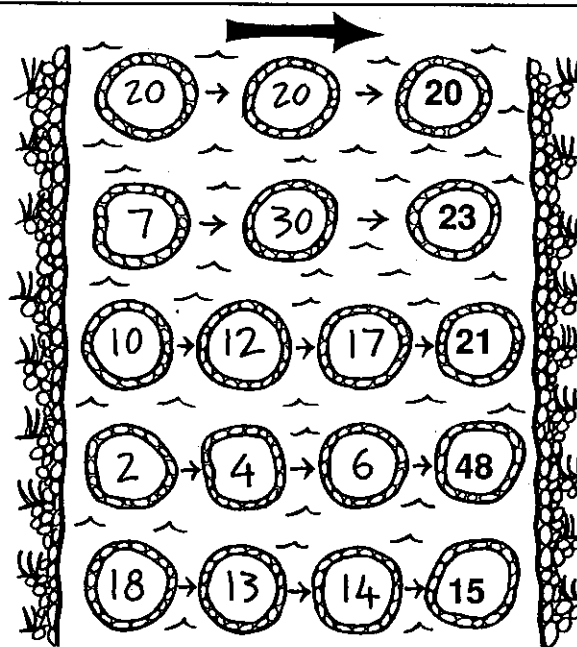
13	8	12	1
3	10	6	15
2	11	7	14
16	5	9	4

15	10	14	3
5	12	8	17
4	13	9	16
18	7	11	6

6	20	19	9
17	11	12	14
13	15	16	10
18	8	7	21

D Number Study

To jump across the river you have to walk on the stepping stones. Each line of stones has to add up to a total of 60 so that you can jump onto the last stone. Find the missing number.



E Number Study

Addition Problems

27 33 + <hr/> 60	19 45 + <hr/> 64	87 64 + <hr/> 151	79 79 + <hr/> 158
------------------------	------------------------	-------------------------	-------------------------

72 108 99 + <hr/> 279	165 6 984 + <hr/> 1,155	391 679 20 + <hr/> 1,090	70 495 98 + <hr/> 663
--------------------------------	----------------------------------	-----------------------------------	--------------------------------

21 60 440 99 + <hr/> 620	200 892 545 24 + <hr/> 1,661	3 333 242 889 + <hr/> 1,467	410 91 1,026 8,045 + <hr/> 9,572
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F Number Study

Addition Problems

- Steve was given \$5 then \$8 then \$7. How much did he have? \$20
- 7 girls arrived at the party then 10 boys, then 8 girls, 4 boys and 6 girls.
 - How many boys were there? 14 boys
 - How many girls were there? 21 girls
- The 22m long house had a 17m extension built. What was its new length? 39m
- The \$120,000 house went up by 22,500 dollars, then another 11,000 dollars.
 - What was its final price? \$153,500
 - $\$42 + \$65 =$ \$107
 - $\$12 + \$56 + \$18 =$ \$86

G Number Study

Subtraction Problems

87 33 - <hr/> 54	62 40 - <hr/> 22	95 35 - <hr/> 60	74 64 - <hr/> 10
------------------------	------------------------	------------------------	------------------------

75 46 - <hr/> 29	42 27 - <hr/> 15	90 43 - <hr/> 47	54 28 - <hr/> 26
------------------------	------------------------	------------------------	------------------------

168 33 - <hr/> 135	468 231 - <hr/> 237	568 369 - <hr/> 199	431 187 - <hr/> 244
--------------------------	---------------------------	---------------------------	---------------------------

8,566 3,145 - <hr/> 5,421	5,279 4,288 - <hr/> 991	4,002 3,620 - <hr/> 382	2,160 2,088 - <hr/> 72
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H Number Study

Subtraction Problems

- Bill, who had \$40 in his wallet paid a \$14 fine. How much did he have left? \$26
- Rain washed away 34 metres of the 300 metre long road. How much was left? 266
- Sue had \$50. Three friends were given \$6 each. What did she have left? \$32
- $\$87 - \30 \$57
- $\$100 - \42 \$58
- $\$16.50 - \11.40 \$5.10
- In a crowd of 640 people 160 of them left early. How many were left? 480

I Number Study

Multiplication Problems

$\begin{array}{r} 9 \\ 7 \times \\ \hline 63 \end{array}$	$\begin{array}{r} 11 \\ 6 \times \\ \hline 66 \end{array}$	$\begin{array}{r} 7 \\ 8 \times \\ \hline 56 \end{array}$	$\begin{array}{r} 13 \\ 4 \times \\ \hline 52 \end{array}$
---	--	---	--

$\begin{array}{r} 71 \\ 5 \times \\ \hline 355 \end{array}$	$\begin{array}{r} 62 \\ 4 \times \\ \hline 248 \end{array}$	$\begin{array}{r} 88 \\ 3 \times \\ \hline 264 \end{array}$	$\begin{array}{r} 34 \\ 8 \times \\ \hline 272 \end{array}$
---	---	---	---

$\begin{array}{r} 12 \\ 9 \times \\ \hline 108 \end{array}$	$\begin{array}{r} 66 \\ 6 \times \\ \hline 396 \end{array}$	$\begin{array}{r} 57 \\ 8 \times \\ \hline 456 \end{array}$	$\begin{array}{r} 13 \\ 2 \times \\ \hline 26 \end{array}$
---	---	---	--

$\begin{array}{r} 71 \\ 6 \times \\ \hline 426 \end{array}$	$\begin{array}{r} 55 \\ 2 \times \\ \hline 110 \end{array}$	$\begin{array}{r} 96 \\ 4 \times \\ \hline 384 \end{array}$	$\begin{array}{r} 31 \\ 5 \times \\ \hline 155 \end{array}$
---	---	---	---

J Number Study

Multiplication Problems

- 12 boxes each containing 30 items were delivered.

How many items were there? 360 items

- Each of the 15 seedboxes contained 20 seedlings.

How many plants were there? 300 plants

- A street containing 89 houses had an average of 3 letters dropped at each home.

How many letters were delivered altogether? 267 letters

K Number Study

Multiplying by Powers of 10

Look at the numbers of noughts on the multiplier and just add them to the number being multiplied.

e.g. $326 \times 1,000 = 326,000$

e.g. $17 \times 10,000 = 170,000$

$43 \times 10 = 430$

$117 \times 100 = 11,700$

$926 \times 10,000 = 9,260,000$

$65 \times 100 = 6,500$

$34 \times 1,000,000 = 34,000,000$

$49 \times 100,000 = 4,900,000$

$126 \times 1,000 = 126,000$

$769 \times 10,000 = 7,690,000$

$1,262 \times 1,000 = 1,262,000$

L Number Study

Multiplication Problems

- Each television (and there were 60 in the shop) contained 420 individual components. How many components were needed altogether?

25,200 components

- The playing field, made up of 7000m² of grass needed 50 grams of fertilizer per metre².

How much fertilizer was needed?

350,000 grams

- (Advanced part!) There are 1000 grams in a kilogram. Can you give the above answer in kilograms?

350kg

M Number Study

Solve the following division problems.
(There are no remainders)

$\begin{array}{r} 9 \\ 3 \overline{) 27} \end{array}$	$\begin{array}{r} 3 \\ 7 \overline{) 21} \end{array}$	$\begin{array}{r} 3 \\ 4 \overline{) 12} \end{array}$
$\begin{array}{r} 7 \\ 5 \overline{) 35} \end{array}$	$\begin{array}{r} 7 \\ 6 \overline{) 42} \end{array}$	$\begin{array}{r} 6 \\ 7 \overline{) 42} \end{array}$
$\begin{array}{r} 11 \\ 8 \overline{) 88} \end{array}$	$\begin{array}{r} 7 \\ 90 \overline{) 630} \end{array}$	$\begin{array}{r} 10 \\ 10 \overline{) 100} \end{array}$
$\begin{array}{r} 12 \\ 7 \overline{) 84} \end{array}$	$\begin{array}{r} 12 \\ 6 \overline{) 72} \end{array}$	$\begin{array}{r} 14 \\ 4 \overline{) 56} \end{array}$
$\begin{array}{r} 13 \\ 3 \overline{) 39} \end{array}$	$\begin{array}{r} 41 \\ 4 \overline{) 164} \end{array}$	$\begin{array}{r} 21 \\ 7 \overline{) 147} \end{array}$

N Number Study

Solve the following division problems

$\begin{array}{r} 114 \\ 4 \overline{) 456} \end{array}$	$\begin{array}{r} 1,051 \\ 7 \overline{) 7,357} \end{array}$	$\begin{array}{r} 421 \\ 6 \overline{) 2,526} \end{array}$
$\begin{array}{r} 257 \\ 3 \overline{) 771} \end{array}$	$\begin{array}{r} 805 \\ 5 \overline{) 4,025} \end{array}$	$\begin{array}{r} 1,986 \\ 2 \overline{) 3,972} \end{array}$
$\begin{array}{r} 136 \\ 8 \overline{) 1,088} \end{array}$	$\begin{array}{r} 652 \\ 9 \overline{) 5,868} \end{array}$	$\begin{array}{r} 986 \\ 4 \overline{) 3,944} \end{array}$
$\begin{array}{r} 541 \\ 6 \overline{) 3,246} \end{array}$	$\begin{array}{r} 1,925 \\ 5 \overline{) 9,625} \end{array}$	$\begin{array}{r} 635 \\ 3 \overline{) 1,905} \end{array}$
$\begin{array}{r} 325 \\ 6 \overline{) 1,950} \end{array}$	$\begin{array}{r} 994 \\ 8 \overline{) 7,952} \end{array}$	$\begin{array}{r} 665 \\ 4 \overline{) 2,660} \end{array}$

O Number Study

Solve these division problems
with remainders.

$\begin{array}{r} 12 \text{ r}1 \\ 4 \overline{) 49} \end{array}$	$\begin{array}{r} 11 \text{ r}2 \\ 7 \overline{) 79} \end{array}$	$\begin{array}{r} 9 \text{ r}3 \\ 8 \overline{) 75} \end{array}$
$\begin{array}{r} 101 \text{ r}3 \\ 6 \overline{) 609} \end{array}$	$\begin{array}{r} 333 \text{ r}1 \\ 3 \overline{) 1,000} \end{array}$	$\begin{array}{r} 4,005 \text{ r}1 \\ 2 \overline{) 8,011} \end{array}$
$\begin{array}{r} 324 \text{ r}4 \\ 5 \overline{) 1,624} \end{array}$	$\begin{array}{r} 442 \text{ r}2 \\ 4 \overline{) 1,770} \end{array}$	$\begin{array}{r} 358 \text{ r}4 \\ 9 \overline{) 3,226} \end{array}$
$\begin{array}{r} 368 \text{ r}3 \\ 4 \overline{) 1,475} \end{array}$	$\begin{array}{r} 888 \text{ r}4 \\ 7 \overline{) 6,220} \end{array}$	$\begin{array}{r} 661 \text{ r}4 \\ 6 \overline{) 3,970} \end{array}$
$\begin{array}{r} 124 \text{ r}2 \\ 3 \overline{) 374} \end{array}$	$\begin{array}{r} 605 \text{ r}3 \\ 9 \overline{) 5,448} \end{array}$	$\begin{array}{r} 411 \text{ r}5 \\ 8 \overline{) 3,293} \end{array}$

P Number Study

Solve these division problems.

8 students shared 144 lollies. How many did they each have?	$\begin{array}{r} 18 \\ 8 \overline{) 144} \end{array}$
7 cartons of batteries had a total of 168 items. How many batteries were in each carton?	$\begin{array}{r} 24 \\ 7 \overline{) 168} \end{array}$
6 classrooms contained 192 students. What was the average number in each room?	$\begin{array}{r} 32 \\ 6 \overline{) 192} \end{array}$
\$6,680 was shared between 4 people. What did they each get?	$\begin{array}{r} \$1,670 \\ 4 \overline{) \$6,680} \end{array}$

Q Number Study

Grouping Numbers Together

Can you insert signs that will make these statements correct?

		1	÷	1	=	1
		2	÷	2	=	1
		6	÷	3	=	2
		9	X	3	=	27
3	X	7	÷	3	=	7
5	+	5	-	5	=	5
4	-	2	-	2	=	0
48	÷	12	+	4	=	8
14	+	12	-	10	=	16
6	X	14	÷	2	=	42
12	÷	4	-	3	=	0
84	÷	4	÷	3	=	7

R Number Study

Simplifying Statements

If there are no brackets, start at the left and move right. Do multiplications and divisions as you come to them. Then additions and subtractions.

Example

$$8 \times 2 + 3 \times 9 - 4 \div 2 = 16 + 27 - 2 = 41$$

Simplify

$$3 \times 2 + 6 \times 4 + 8 \div 2 = \underline{6+24+4 = 34}$$

$$6 \times 7 - 4 \times 5 = \underline{42-20 = 22}$$

$$3 \times 5 + 2 \times 8 - 6 = \underline{15+16-6 = 25}$$

$$100 \div 2 - 5 \times 4 = \underline{50-20 = 30}$$

$$30 - 6 \times 4 + 5 = \underline{30-24+5 = 11}$$

$$50 \div 5 \div 2 + 3 = \underline{5+3 = 8}$$

S Number Study

Simplifying Statements

Solve brackets, then x, ÷, + and -

Simplify

$$(13 + 7) \div 2 + (18 \div 2) \times 2 = \\ \underline{20 \div 2 + 9 \times 2 = 10+18 = 28}$$

$$(2 \times 3 \times 4) \div 2 - (4 \times 2) = \\ \underline{24 \div 2 - 8 = 12-8 = 4}$$

$$(44 \div 2) - 2 + (4 \times 4) = \\ \underline{22-2+16 = 20+16 = 36}$$

$$(16 + 4 + 20) \times 2 - 15 = \\ \underline{40 \times 2 - 15 = 80-15 = 65}$$

$$2 \times (14 + 6 + 10 + 2) - 14 = \\ \underline{2 \times (32) - 14 = 64-14 = 50}$$

T Number Study

Simplifying Statements

If there is more than one bracket do the "inside" brackets first.

Simplify

$$[6 + (5 \times 6)] \div [(2 \times 2) + 2] + 5 \\ \underline{[6+30] \div [4+2] =} \\ \underline{36 \div 6 + 5 = 6+5 = 11}$$

$$[(4 \times 5) + (3 \times 2) + 2] \times 5 \\ \underline{[20+6+2] \times 5 =} \\ \underline{[28] \times 5 = 140}$$

$$[18 - (3 \times 4)] \times [7 \times 6 \div 7 + (3 \times 1)] \\ \underline{[18-12] \times [42 \div 7 + 3] =} \\ \underline{[6] \times [6+3] = 6 \times 9 = 54}$$

$$[16 - (4 \times 4)] \times [(8 + 4) \times 6] + 6 \\ \underline{[16-16] \times [12 \times 6] + 6} \\ \underline{= [0] \times [72] + 6 = 0 \times 72 + 6 = 6}$$

A The Number Line

Work out the temperatures below.

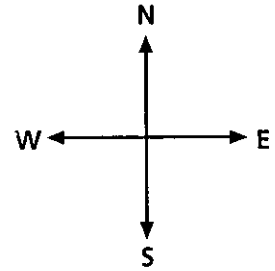


- It is 23°C. What will it be if it rises another 14°C? 37°
- What temperature is 14°C lower than 23°C? 9°
- The lowest temperature over the day was 8°C and the highest was 35°C. How much had the temperature varied over the day? 27°
- It was 16°C and the temperature rose 4°C per hour for the next 4 hours. What was the final temperature? 32°

$$20^{\circ} + 8^{\circ} + 6^{\circ} - 2^{\circ} - 2^{\circ} = \underline{30^{\circ}}$$

B The Number Line

If you travelled the indicated distances and directions given below where would you be?



- 20 km North then 8 km South. 12km North
- 3 km East then 4 km West 1km West
- 4 km North + 17 km North then 8 km South 13km North
- 12 km North + 3 km North then 6 km south then 9 km south 0
- 8 km E + 7 km E then 3 km W then 5 km W. 7km East
- You are 30 km East. How far must you travel to reach the point 40 km West? 70km West

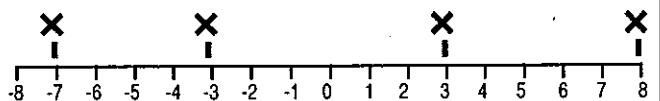
C The Number Line

Can you think of words that mean the opposite to the following?

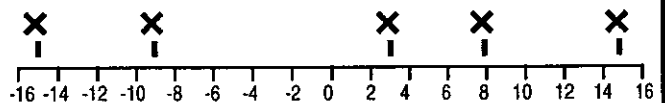
North	<u>South</u>
<u>negative</u>	Positive
Rise	<u>fall</u>
<u>decrease</u>	Increase
Outside	<u>inside</u>
<u>below</u>	Above
Accelerate	<u>deccelerate</u>
Increase	<u>decrease</u>
<u>lose</u>	Win
Gain	<u>loss</u>
Left	<u>right</u>
<u>North-East</u>	South-west
<u>west</u>	East
Before	<u>after</u>

D The Number Line

Mark the points indicated below on the number lines with a cross.



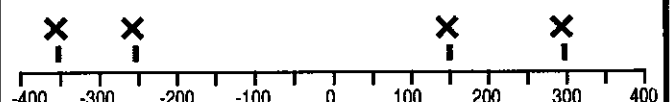
Mark the points - 3, -7, 3, 8



Mark the points 8, 3, -9, -15, 15



Mark the points - 65, 65, -32, 48, 6



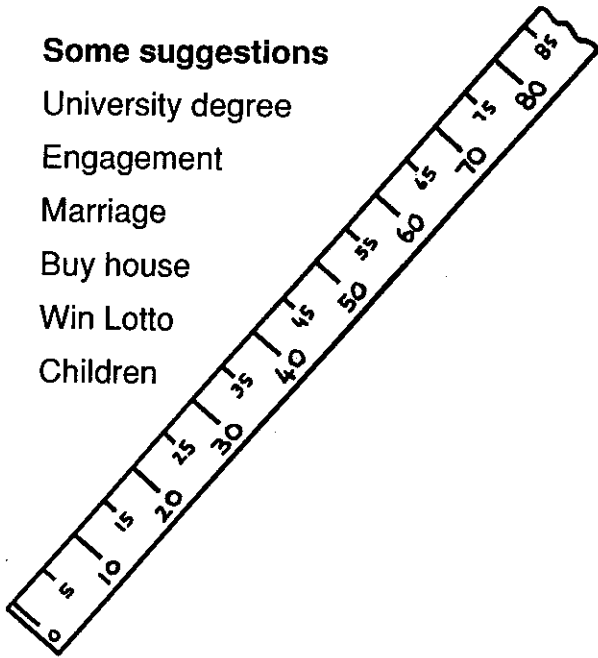
Mark the points 150, -250, 300, -350

E The Number Line

The number line below could represent your life from birth to death. Write the events you would like to happen next to the appropriate year.

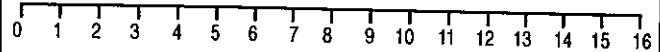
Some suggestions

University degree
Engagement
Marriage
Buy house
Win Lotto
Children



F The Number Line

Positive number line



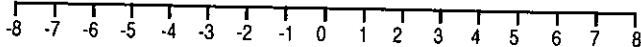
The line just represents positive numbers.

Work out the next numbers in the series involving positive numbers.

1	3	5	7	9	11	13	15	17	19	21	23
0	4	8	12			16	20	24	28	32	36
1	6	11	16			21	26	31	36	41	46
28	26	24	22	20		18	16	14	12	10	8
30	27	24	21	18		15	12	9	6	3	0
31	29	27	25			23	21	19	17	15	13
7	14	21	28			35	42	49	56	63	70
80	71	62	53			44	35	26	17	8	

G The Number Line

Positive and Negative Numbers



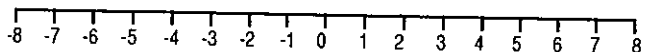
The number line can extend into negative numbers.

Find the next numbers in the series below.

4	3	2	1	0	-1	-2	-3	-4
8	6	4	2	0	-2	-4	-6	-8
5	2	-1	-4		-7	-10	-13	-16
-10	-8	-6	-4		-2	0	2	4
20	15	10	5		0	-5	-10	-15
30	20	10	0		-10	-20	-30	-40
18	12	6			0	-6	-12	-18
15	9	3			-3	-9	-15	-21
-32	-22	-12			-2	8	18	28

H The Number Line

Ascending and Descending Order



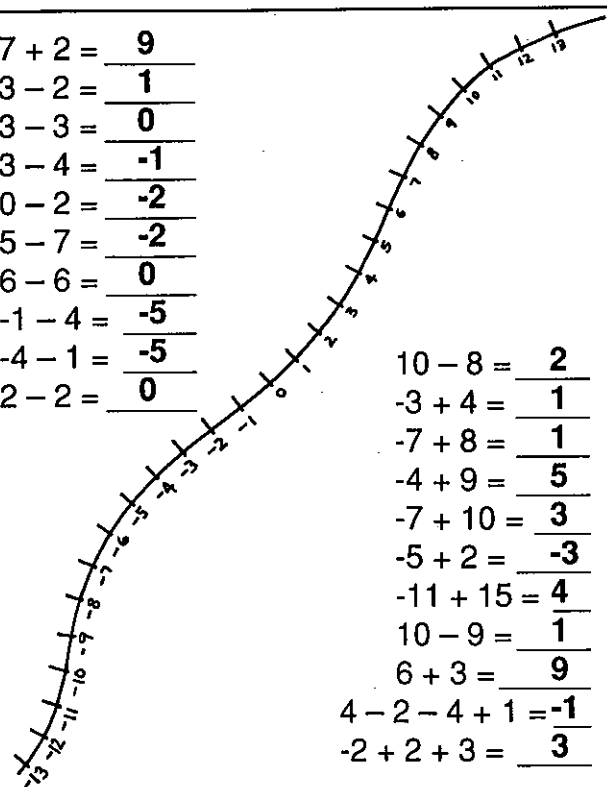
Arrange the following numbers into ascending order.

-1	8	4	-3	-3	-1	4	8
12	-12	6	-6	-12	-6	6	12
2	0	8	-1	-1	0	2	8
-40	-50	3	-17	-50	-40	-17	3
3	-4	-10	8	-10	-4	3	8
-15	2	-16	-13	-16	-15	-13	2
10	4	-3	5	-3	4	5	10
40	-14	7	60	-14	7	40	60
-12	-7	0	64	-12	-7	0	64
8	-40	34	0	-40	0	8	34

I The Number Line

Use the number line to answer these questions.

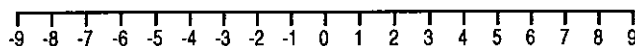
$$\begin{array}{rcl} 7 + 2 & = & 9 \\ 3 - 2 & = & 1 \\ 3 - 3 & = & 0 \\ 3 - 4 & = & -1 \\ 0 - 2 & = & -2 \\ 5 - 7 & = & -2 \\ 6 - 6 & = & 0 \\ -1 - 4 & = & -5 \\ -4 - 1 & = & -5 \\ 2 - 2 & = & 0 \end{array}$$



$$\begin{array}{rcl} 10 - 8 & = & 2 \\ -3 + 4 & = & 1 \\ -7 + 8 & = & 1 \\ -4 + 9 & = & 5 \\ -7 + 10 & = & 3 \\ -5 + 2 & = & -3 \\ -11 + 15 & = & 4 \\ 10 - 9 & = & 1 \\ 6 + 3 & = & 9 \\ 4 - 2 - 4 + 1 & = & -1 \\ -2 + 2 + 3 & = & 3 \end{array}$$

J The Number Line

Find the midway point between the pairs of numbers given below.



6 and 2	<u>4</u>	-6 and 0	<u>-3</u>
8 and 4	<u>6</u>	0 and 8	<u>4</u>
0 and 6	<u>3</u>	-8 and 6	<u>-1</u>
2 and 8	<u>5</u>	-8 and 8	<u>0</u>
2 and 0	<u>1</u>	-7 and -1	<u>-4</u>
-2 and 0	<u>-1</u>	-5 and -1	<u>-3</u>
-4 and 0	<u>-2</u>	-4 and 6	<u>1</u>
-2 and 2	<u>0</u>	-9 and 9	<u>0</u>
-2 and 4	<u>1</u>	-3 and 1	<u>-1</u>
-8 and 0	<u>-4</u>	-1 and 5	<u>2</u>

K The Number Line

Put the correct sign into the operations below.

6 <u>-4</u> = 2	8 <u>-8</u> = 0
-4 <u>+4</u> = 0	7 <u>-9</u> = -2
-1 <u>+3</u> = 2	6 <u>-9</u> = -3
2 <u>-5</u> = -3	4 <u>-9</u> = -5
3 <u>-8</u> = -5	2 <u>-12</u> = -10
4 <u>+7</u> = 11	3 <u>-4</u> = -1
0 <u>-6</u> = -6	12 <u>-9</u> = 3
-2 <u>-1</u> = -3	4 <u>-12</u> = -8
-10 <u>+2</u> = -8	-7 <u>+10</u> = 3
-10 <u>+10</u> = 0	-7 <u>+9</u> = 2
-6 <u>+8</u> = 2	10 <u>-11</u> = -1
-5 <u>+1</u> = -4	9 <u>-11</u> = -2
-2 <u>+1</u> = -1	-2 <u>+8</u> = 6
0 <u>+8</u> = 8	2 <u>+0</u> = 2

L The Number Line

Hitting the target.

It can take anything between minutes to hours to get to the target number

Examples

$$-5 + 2 = -3$$

$$6 - 2 = 4 \text{ or } -4 + 4 = 0$$

M The Number Line

Directed Numbers

$$7 + 6 - 4 + 3 - 8 = 4$$

This can be written as:

$$(+7) + (+6) + (-4) + (+3) + (-8) = 4$$

Work out the following.

$$(-3) + (+2) + (+20) + (-8) + (-8) = \underline{(+3)}$$

$$(+20) + (-3) + (-8) + (-5) + (-4) = \underline{0}$$

$$(+62) + (-20) + (+3) + (-15) + (+7) = \underline{(+37)}$$

$$(-80) + (+20) + (+30) + (+30) + (-80) = \underline{(-80)}$$

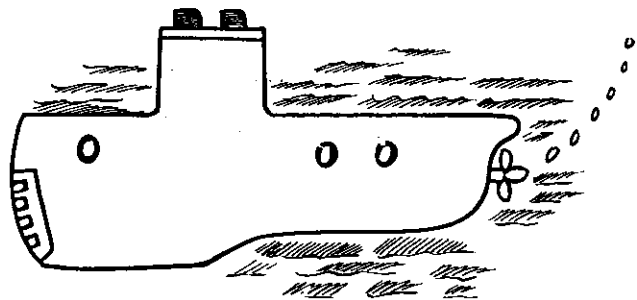
$$(0) + (+16) + (24) + (-60) + (+5) = \underline{(-15)}$$

N The Number Line

Submarine Problem

Final Depth

$$(0) + (-200) + (+60) + (-34) + (+20) = -154\text{m}$$



O The Number Line

Solve the following problems.

$$(-8) + (+8) = 0$$

$$(+36) + (-36) = 0$$

$$(+100) + (-110) = -10$$

$$(-80) + (-20) = -100$$

$$(-10) + (+35) = (+25)$$

$$(+10) + (+13) = (+23)$$

$$(-12) + (-8) = (-20)$$

$$(+200) + (-700) = (-500)$$

$$(+62) + (+10) + (+10) = (+82)$$

$$(+35) + (-70) = (-35)$$

$$(-12) + (+24) = (+12)$$

$$(-3) + (+4) = 1$$

$$(-1,000) + (+500) = (-500)$$

$$(-2) + (-2) + (-2) + (-4) = (-10)$$

P The Number Line

Walking Problem/ You set a problem!

A woman walks 2 km north, 3 km south, 11 kilometres south, 5 km north and 8 km south.

Set up a number statement to find out where she finishes up.

$$\begin{aligned} &(+2) + (-3) + (-11) \\ &+ (+5) + (-8) \\ &= -15 \end{aligned}$$

You set a problem.

$$8 + 4 - 1 + 2$$

Write out a statement that uses the above numbers.

$$\begin{aligned} &(+8) + (+4) + (-1) \\ &+ (+2) = +13 \end{aligned}$$